IDEM
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

LAND

INDIANA WATER POLLUTION CONTROL ASSOCIATION

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Land Application Rule Revision Update and Public Meeting

By Brenda Stephanoff

To update readers on the land application rule changes, on October 9, 2002, staff of the Office of Land Quality presented the draft rule with changes to 327 IAC 6.1 to the Indiana Water Pollution Control Board for preliminary adoption. During the board's discussion of the rule, some board members raised concerns with how access to land application sites is restricted after application of biosolids. The board members indicated they would like information from IDEM about the difference between Class A and Class B biosolids and about access restriction to sites, such as the pros and cons of posting signs at land application sites. Despite this discussion the board agreed to preliminarily adopt the changes to the rule.

In response to the Board's request, staff of the Land Application Program gathered information and conducted a survey of other state's land application regulations to determine who has a requirement to post signs at biosolids land application sites. This survey also requested the specific language required on the signs and where the signs are required to be posted. Twenty-eight states responded and it was found that nine states require the permittee to post signs and seven states add sign requirements to specific permits as the state deems necessary. This information as well as information on the difference between Class A and Class B biosolids was compiled and sent to the board members.

At the February 12, 2003 Indiana Water Pollution Control Board meeting, the board members discussed this issue and decided more information and discussion was needed. They requested that IDEM staff gather information from interested parties regarding site access restrictions for Class B biosolids. The Board also decided to allow the current rule changes to proceed. The changes to the land application rules were final adopted on March 12, 2003, by the Board. This rule should be effective this summer.

If it is decided that specifications for site access restrictions are warranted, a separate rule-making effort will be initiated. As the first step in discussing this issue, IDEM has scheduled a public meeting for anyone with an interest to provide information supporting their point of view.

PUBLIC MEETING NOTICE

A public meeting has been scheduled on April 29, 2003, at 1:00 p.m. in the Indiana Government Center South, Conference Rooms 1 & 2. This public meeting is open to all permit holders, consultants, landowners and other interested parties to discuss specifying site access restrictions for land application sites where Class B biosolids are applied. Your participation in this meeting is welcome.

Comparison of Land Application Activities in Indiana during the years 2001 & 2002

By Jeff Harmon

	2001 revised	2002
Number of facilities that land applied biosolids:	161	151
Number of facilities that land applied industrial waste products:	22	18
Number of facilities that land applied pollutant-bearing water:	30	28
Total acreage of sites used for biosolids application:	28,250	29,960
Total acreage of sites used for industrial waste product application:	11,272	9,670
Total acreage of sites used for pollutant-bearing water application:	2,277	2,306
Dry tons of biosolids land applied:	53,018	51,371
Dry tons of industrial waste products land applied:	36,144	24,746
Gallons of pollutant-bearing water land applied:	414,523,342	364,239,150
Percentage of total volume of biosolids and industrial waste products handled by Regional Biosolids Centers:	7.10%	8.80%
Crop receiving the greatest volume of biosolids and industrial waste products:	corn (73%)	corn (84%)
Crop receiving the lowest volume of biosolids and industrial waste product:	hay (1%)	pasture (<1%)
Percentage of biosolids surface applied:	28%	28%
Percentage of biosolids injected:	35%	34%
Percentage of biosolids surface applied followed by incorporation:	37%	38%
Percentage of industrial waste products surface applied:	56%	50%
Percentage of industrial waste products injected:	10%	18%
Percentage of industrial waste products surface applied followed by incorporation:	34%	32%
Pounds of plant available nitrogen applied from biosolids:	1,694,971	1,510,142
Pounds of phosphorus applied from biosolids:	2,152,444	1,940,203
Pounds of potassium applied from biosolids:	274,691	274,729
Pounds of plant available nitrogen applied from industrial waste products:	668,898	544,919
Pounds of phosphorus applied from industrial waste products:	433,029	421,242
Pounds of potassium applied from industrial waste products:	316,721	383,389
Pounds of plant available nitrogen applied from pollutant-bearing water:	8,733	5,340
Pounds of phosphorus applied from pollutant-bearing water:	2,359	1,844
Pounds of potassium applied from pollutant-bearing water:	6,339	6,614
Estimated average fertilizer value per dry ton of biosolids:	$29.55	$27.54
Estimated average fertilizer value per dry ton of industrial waste product:	$11.87	$16.39
Estimated total fertilizer value of biosolids applied:	$1,561,345	$1,414,968
Estimated total fertilizer value of industrial waste products applied:	$428,971	$405,606
Estimated dry tons of biosolids landfilled by facilities with a land application permit:	31,854	52,776

Subsoil Moisture and the Biosolids Advantage

By Ted Merrell, Merrell Brothers

This past winter has certainly been one for the record books in many areas of the State. The near record snowfall combined with cold temperatures to allow much of Indiana to experience an arctic blast that won't soon be forgotten. Many of the agricultural meteorologists throughout the State are reporting that due to the snow fall that we have experienced this winter, we should see a replenishment of the subsoil moisture that is so valuable to Indiana crop farmers. Other analysts disagree with this replenishment theory. This disagreement stems from the argument that the sub frozen temperatures we have experienced have kept the ground frozen for most of the winter. This opposing theory concludes that the frozen ground has prevented the melting snow and ice from penetrating into the ground, therefore not replenishing the subsoil moisture.

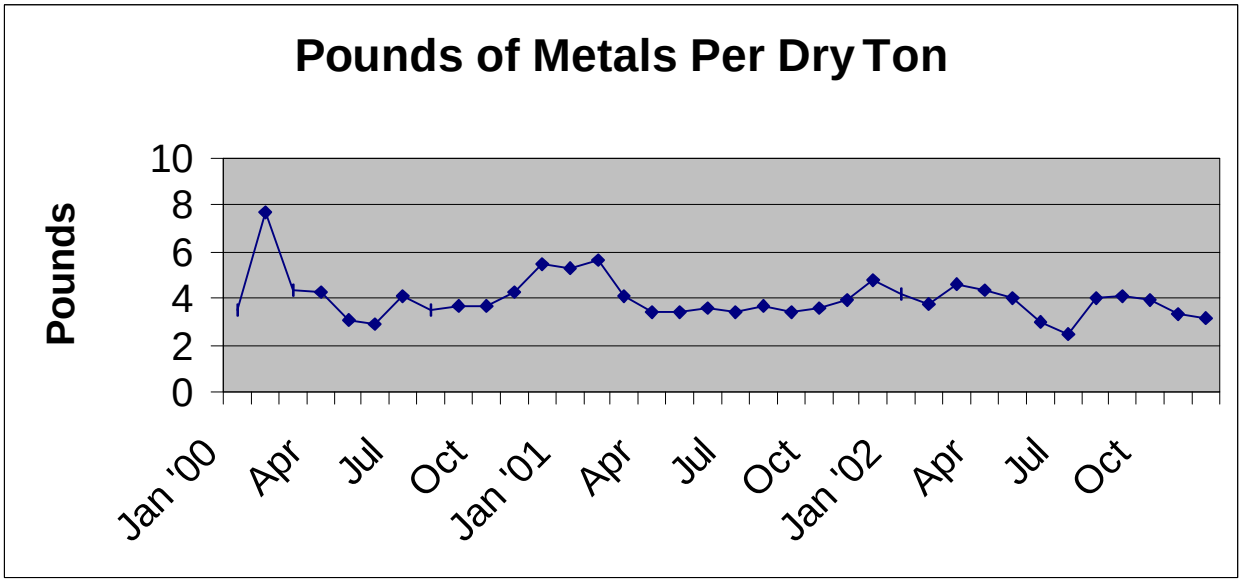
If you remember back to this last summer and fall much of the State was beginning to become concerned about our subsoil moisture, and the lack there of, that could create quite a deficiency for the 2003 growing season. Subsoil moisture is vital to producing the bumper crops found in much of Indiana's breadbasket regions. Without subsoil moisture, the root systems of the growing crops will not be able to find the water necessary to sustain plant development during the hot dry summers. Essentially the plant will dry up, and in many cases die, due to insufficient moisture. The plant will spend all of its energy simply trying to survive instead of producing seed.

Land application sites that have been utilized for biosolids have received an added advantage when it comes to moisture retention. The organic qualities of biosolids help to provide for increased moisture holding capacity in the soil. The organic properties in the biosolids work as a sponge to hold on to moisture. This ability to retain moisture is especially valuable during the hot summer months when the crop is searching for all the water it can find to survive. The biosolids advantage could mean the difference between profit and loss.

Heavy Metal Trends

By Jeff Harmon

The heavy metal concentration in biosolids continues to generally decline in Indiana as seen in the following chart covering the last three years of data. Can anyone suggest a reason for what appears to be a seasonal cycle that results in higher concentrations in cold months and lower concentrations in warm months?



Change in Staff in the Land Application Program

In December 2002, Jon Ware was assigned to work in the Confined Feeding Program within the Solid Waste Permits Section. For the past couple of years Jon has been "helping out" in that program due to the reduction in staff members, the increasing number of pending confined feeding applications and manure management plans.

Jon worked in the Land Application Program for the past 10 years. He takes a lot of knowledge and experience regarding land application with him and we wish Jon well in his new duties.

Joyce Rives has replaced Jon in the Land Application Program. Joyce has worked with IDEM since 1987. She is responsible for reviewing all land application monthly reports and will review some permit applications. Please join me in welcoming Joyce to our program.

As has always been the case, you may contact us if you have any questions as follows:

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